

## CLAIMS

### WHAT IS CLAIMED IS:

- 1           1. A device comprising:  
2                 a fiber optic bundle having a termination block;  
3                 an array waveguide having channels internally, the array waveguide  
4                 positioned adjacent to the termination block; and  
5                 two pins each partially extending into both the termination block and the  
6                 array waveguide.
- 1           2. The device of claim 1, wherein the termination block comprises two retainers  
2           having etched grooves in them, and the two pins extend into holes formed by placing  
3           the two etched substrates together.
- 1           3. The device of claim 2, wherein the array waveguide has two holes formed by  
2           an etch process.
- 1           4. The device of claim 2 further comprising  
2                 a gel dispensed between the termination block and the array waveguide.
- 1           5. The device of claim 4, wherein the gel has an index of refraction substantially  
2           similar to that of the channels of the array waveguide.

1 6. A method of aligning a fiber optic bundle with an array waveguide comprising:  
2 inserting pins into holes formed in both the fiber optic bundle and the array  
3 waveguide; and  
4 pressing the fiber optic bundle and the array waveguide together so that the  
5 pins extend into both the fiber optic bundle and the array waveguide.

1 7. The method of claim 6 further comprising:  
2 finely aligning optical fibers in the fiber optic bundle with channels of the  
3 array waveguide.

1 8. The method of claim 7 further comprising:  
2 applying an epoxy to bond the fiber optic bundle to the array waveguide.

1 9. The method of claim 8 further comprising:  
2 dispensing an optical gel between the fiber optic bundle and the array  
3 waveguide.

1 10. The method of claim 9, wherein the optical gel has an index of refraction  
2 substantially similar to channels in the array waveguide.

1 11. The method of claim 10 further comprising:  
2 curing the epoxy while maintaining alignment between the optical fibers and  
3 the channels of the array waveguide.

1           12. A method of aligning a fiber optic bundle with an array waveguide  
2 comprising:  
3           inserting two pins into holes formed in an end of the fiber optic bundle;  
4           inserting opposite ends of the two pins into the array waveguide; and  
5           pressing the fiber optic bundle and the array waveguide together.

1           13. The method of claim 12 further comprising:  
2           adjusting the fiber optic bundle and the array waveguide to improve photonic  
3           coupling between optical fibers of the fiber optic bundle and channels  
4           of the array waveguide.

1           14. The method of claim 13 further comprising:  
2           dispensing an epoxy between the fiber optic bundle and the array waveguide.

1           15. The method of claim 14, wherein the dispensing the epoxy is performed by  
2 dispensing an epoxy having an index of refraction substantially similar to the channels  
3 of the array waveguide.